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(54) VINYL CHLORIDE SMALL DIAMETER INLET HAVING DROP INVERT PART AND USAGE THEREFOR

(57)Abstract:

PROBLEM TO BE SOLVED: To endure a road surface load by expanding the reaction area in a public vinyl chloride small diameter inlet having the drop invert part.

SOLUTION: A public vinyl chloride small diameter inlet 1 has a seamless inspection cylinder 4 opening an inflow port according to an execution work site and the drop invert part 2 having a lower outflow port 8. Then, the inspection cylinder 4 and the drop invert part 2 and also an outward flange 5 on the lower end of the inspection cylinder 4 are respectively, integrally and injectively molded, and this flange 5 is placed on a perforated pedestal on a compacted backfilling layer to expand the reaction area.

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 CLAIMS

[Claim(s)]

[Claim 1]in the diameter measure of the header made from vinyl chloride with the joint-less inspection cylinder of the long picture which carries out opening of the input for drain pipes according to a construction site, and drop Invar Urabe, while really fabricating said inspection cylinder and drop Invar Urabe with injection moldingthe diameter measure of the header made from vinyl chloride with drop Invar Urabe characterized by securing the perpendicularity of an inspection cylinder while expanding a reaction force active area caudad by [of this inspection cylinder] really fabricating the plinth contact section with injection molding, and preparing it.

[Claim 2]the diameter measure of the header made from vinyl chloride with drop Invar Urabe who formed the plinth contact section of claim 1 by the flange which extended to the method of outside, and did adhesion installation on the plinth.

[Claim 3]the diameter measure of the header made from vinyl chloride which has drop Invar Urabe who did adhesion installation in sense inclined plane Tori while the pars infundibularis lobi anterioris hypophyseos which is inner direction facing down and prepared the spigot part in the central lower part was really fabricated to the soffit of the inspection cylinder of claims 1 or 2 with injection molding and the outside surface of this pars infundibularis lobi anterioris hypophyseos was established in it at the bore side of a hole vacancy plinth.

[Claim 4]by the diameter measure of the header made from vinyl chloride with the joint-less inspection cylinder of the long picture which carries out opening of the input for drain pipes according to a construction site, and drop Invar UrabeWhile really forming said inspection cylinder and drop Invar Urabe with injection moldingthe usage of the diameter measure of the header made from vinyl chloride with drop Invar Urabe characterized by sending the perpendicularity of an inspection cylinder by being in the usage of the diameter measure of the header made from vinyl chloride which really formed the plinth contact section with injection molding caudad of an inspection cylinder, and laying in the plinth which made the plinth contact section the shape of a horizontal.

 DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]this inventions are the diameter measure of the header made from vinyl chloride with drop Invar Urabe, and the diameter measure of the header made from public common vinyl chloride and the thing about the usage especially.

[0002]

[Description of the Prior Art]conventionally, the common facilities for drainage which attached this kind of diameter measure of the header made from public common vinyl chloride are shown in drawing 5.

[0003]that is, the parts of a foot walk and C serve as [the parts of **** and B] a roadway; the part in [A] drawing acts as Shimogoe of the channel 51 near the boundary of the edge of **** A, and the route time, and the diameter measure 50 of the header made from public common vinyl chloride is installed.

[0004]about the public measure which has drop Invar Urabe 52 especially about this diameter measure 50 of the header made from public common vinyl chloride,

these people already proposed (Japanese Patent Application No. No. 23724 [six to]), and have acquired the patent right.

[0005]This is explained. in this drawing, the inspection cylinder (it starts and is also called the section) 53 with this drop Invar Urabe 52 of the diameter measure 50 of the header made from public common vinyl chloride consists of one ready-made vinyl chloride tubing (seamless pipe) with an aperture [phi] of 300-600mm, and the diameter of that soffit is expanded a little in the shape of a skirt board. Moreover, inner fitting of the cylinder 54 with the receiving frame made from vinyl chloride is carried out to the upper bed, and the lid 55 made from vinyl chloride is formed in this. In addition, it is hardened by the periphery of this lid 55 with the protection ring object 56 made from concrete flat-tapped with surface of the earth GL.

[0006]Although the drain pipe 57 in ** is connected to this inspection cylinder 53, he makes the drain pipe 57 in this ** into site operation so that it can connect with any drain pipe 57 in **, therefore is trying to connect it through the 90-degree branch pipe 58, since a burial depth, the inflow direction, aperture, etc. change with construction sites.

[0007]Moreover, following drop Invar Urabe 52 is attached in this inspection cylinder 53 as site operation.

[0008]That is, this drop Invar Urabe 52 is connected through the free bend (the bend for TS junction or rubber ring junction or a straight pipe is also good) 60 in order to connect with the mounting tubing 59 laid under the bottom of a roadway. In addition, this mounting tubing 59 is connected to a sewer 63 through the rubber ring socket bend 61 and the 90-degree branch pipe 62.

[0009]The funnel object 64 with which said especially drop Invar Urabe 52 formed the underflow section (tap hole) in the center section, The cylinder object 66 which bent the upper bed of said funnel object 64 caudad, and carried out the pendant to the spigot part 65 installed caudad from the center section of this funnel object 64, the flange 67 which bends the soffit of this cylinder object 66 outward, and supports the soffit of said funnel object 64 and the inspection cylinder 53 -- since -- it constitutes and these are really fabricated by injection molding.

[0010]And between the upper bed of said funnel object 64, and the inner surface of the inspection cylinder 53, it intervenes and the seal of the packing (un-illustrating) is carried out. And drop Invar Urabe 2 is beforehand equipped with this packing, and it is carried into a construction site.

[0011]The standard handling in the construction site of the above inspection cylinders 53, the drain pipe 57 in **, and drop Invar Urabe 52 is described.

[0012]First, the straight pipe made from vinyl chloride (vinyl chloride tubing) is ****(ed), the inspection cylinder 53 according to a burial depth is made, and the diameter of the soffit of this inspection cylinder 53 is expanded a little. next, the free bend 60 which it was already laid underground, and the compaction condition carried out the back filling, and projected on the layer 69 -- a hole -- a vacancy or the doughnut-like plinth (the product made from concrete or product made of compound resin) 70 is attached outside, drop Invar Urabe 52 who carried packing on it is laid, and the spigot part 65 is joined to the free bend 60 with glue (of course, an adhesive joint is performed later). Subsequently, the inspection cylinder 53 is inserted in this drop Invar Urabe 52 from that soffit side.

[0013]Consequently, the soffit of the inspection cylinder 53 contacts a flange 67. Subsequently, input is made consistent with the location of the drain pipe 57 in **, and hoe Rousseau punches the inspection cylinder 53. The 90-degree branch pipe 58 is joined to this punched input with glue.

[0014]Therefore, if vehicle load acts on the lid 55 of the inspection cylinder 53, the vehicle load will act on drop Invar Urabe's 52 flange 67 from the inspection cylinder 53, and, subsequently will be supported by the plinth 70 which was fastened and hardened and which carried out the back filling and was laid in the shape of a horizontal on the layer 69.

[0015]By the way, generally the following thing is said as one of the cures against a crack of the sewer laid underground.

[0016]namely, in order to increase the vehicle load-proof of a sewer (loading capacity) and to prevent the crack of a sewer, and breakage on the occasion of laying constructionAlthough it is said that the stress concentration produced in a shell by expanding the back face of the sewage book tube bottom section, enlarging the touch area of tubing and earth and sand, such as a sand foundation, and aiming at amplification of the reaction force active area to vehicle load is mitigated, and loading capacity is increasedwhen the thought of the cure against a crack of this sewer was collated with the diameter measure 50 of the header made from vinyl chloride with said drop Invar Urabe 52, it newly became clear that there were the following problems.

[0017]

[Problem(s) to be Solved by the Invention]since the diameter measure of the header made from public common vinyl chloride is laid underground near the boundary of the edge of ****, and the route time as mentioned above, although there is generally no vehicle load by the car, heavy vehicle loads, such as a car, are applied suddenly, it also boils occasionally that this acts on said inspection cylinder 53, and it is done.

[0018]Consequently, from the soffit diameter expansion section of the inspection cylinder 53, this heavy vehicle load acts on drop Invar Urabe's 52 flange 67, and is supported by the plinth 70.

[0019]However, by the diameter expansion activity in production works, since the soffit diameter expansion section of the inspection cylinder 53 is a diameter expansion activity in a site, since contact area (reaction force active area) of the soffit diameter expansion section is not made so greatly, generating of stress concentration is not avoided, either.

[0020]And because the inspection cylinder 53 is ready-made vinyl chloride tubing, contact of the soffit diameter expansion section and drop Invar Urabe's 52 flange 67 cannot necessarily be stuck fully, as a result cannot receive a vertical distributed load uniformly by the plinth 70.

[0021]Consequently, the plinth 70 carried out the bias depression and there was a problem that it might become a grave situation where vehicle load acts to the mounting tubing 59.

[0022]on the other hand, since public measure is designed so that an inflow and runoff side may become regular inclination when a top face is leveled, it checks whether it is surely level with level etc. about the top face of public measure. If this is level, predetermined inclination is not only acquired, but naturally an inspection cylinder will become a perpendicular (vertical).

[0023]however, in order that drop Invar Urabe 52 of said diameter measure 50 of the header made from public common vinyl chloride might connect with free bend 60 grade, even if it checked the perpendicularity of the inspection cylinder 53 using level, because it was a universal joint (or a rubber ring joint is also contained), the problem that the perpendicularity of the inspection cylinder 53 could not be stabilized easily newly became clear.

[0024]then, this invention sets it as the main object to aim at amplification of the reaction force active area between the diameter measure 50 of the header made from public common vinyl chloride and plinths 70 with drop Invar Urabe 52, and sets it as the subslack object to simplify site operation more.

[0025]

[Means for Solving the Problem]In the diameter measure of the header made from vinyl chloride in which this invention has the joint-less inspection cylinder of the long picture which carries out opening of the input for drain pipes according to one construction site, and drop Invar Urabe in order to attain this objectWhile really fabricating said inspection cylinder and drop Invar Urabe with injection moldingWhile expanding reaction force active area caudad by [of this inspection cylinder] really fabricating the plinth contact section with injection molding, and preparing itIt is in the diameter measure of the header

made from vinyl chloride with drop Invar Urabe characterized by securing the perpendicularity of an inspection cylinder. Moreover, it is in the diameter measure of the header made from vinyl chloride with drop Invar Urabe who formed the plinth contact section of two claims 1 by the flange which extended to the method of outside, and did adhesion installation on the plinth. downward [inner direction] to the soffit of the inspection cylinder of three claims 1 or 2 And the pars infundibularis lobi anterioris hypophyseos which prepared the spigot part in the central lower part is really fabricated with injection molding. with the joint-less inspection cylinder of the long picture which sense inclined plane Tori has at the diameter measure of the header made from vinyl chloride with drop Invar Urabe who did adhesion installation while the outside surface of this pars infundibularis lobi anterioris hypophyseos was established in the bore side of a hole vacancy plinth, and carries out opening of the input for drain pipes according to four construction sites by the diameter measure of the header made from vinyl chloride with drop Invar Urabe, while really forming said inspection cylinder and drop Invar Urabe with injection molding by being in the usage of the diameter measure of the header made from vinyl chloride which really formed the plinth contact section with injection molding caudad of an inspection cylinder, and laying in the plinth which made the plinth contact section the shape of a horizontal let the usage of the diameter measure of the header made from vinyl chloride with drop Invar Urabe characterized by taking out the perpendicularity of an inspection cylinder be a summary.

[0026] Therefore, the following embodiment is included in this invention.

[0027] ** make this diameter measure of the header made from vinyl chloride into public measure, and use it for the narrow route where the horizontal distance of a sewer and public measure is short, and a location with a level difference conveniently.

[0028] ** use conveniently this diameter measure of the header made from vinyl chloride for fall adjustment of the measure in **.

[0029] ** As drop Invar Urabe's spigot part is inserted in the straight pipe with a rubber ring socket of a mounting tube side, exclude an adhesive joint activity, and raise workability further.

[0030]

[Embodiment of the Invention] The example of a gestalt of the operation which shows this invention to an accompanying drawing describes to a detail. the part to which drawing 1 is the same or equal, and common in the diameter measure 50 of the header made from public common vinyl chloride with conventional drop Invar Urabe 52 who is important section drawing of the example of drawing 1, and shows by drawing 5 is provided as it is, and although omit this and it is not illustrated, the vocabulary and a drawing sign are used as it is. [the important section side elevation of the example of a gestalt of operation of this invention and drawing 2] [the top view of drawing 1 and drawing 3] [the whole example drawing of longitudinal section of a gestalt of operation of drawing 1 and drawing 4]

[0031] Drop Invar Urabe of the example of a gestalt of operation of this invention (the tap hole to the mounting tubing 59 carries out sense opening caudad) Invar Urabe down whom wastewater flows in the shape of a drop is said -- the diameter measure 1 of the header made from public common vinyl chloride with 2 The path of the waste pipe 57 in ** can apply to 100mmphi, 125mmphi, 150mmphi, etc., and, of course, the path of the spigot part 8 at the time of the application is used, respectively, changing into about 110mmphi, about 140mmphi, and about 150mmphi.

[0032] Vinyl chloride injection molding (it fabricates with the same metal mold simultaneously) is carried out to the inspection cylinder 4, and especially this. drop Invar Urabe 2 is united, and also really injection molds the horizontal-like (letter of rectangular cross) flange 5 as well as the improvement in mass production nature or the handling nature in a construction site. expanding reaction force active area by this flange 5 **** -- a hole -- the

perpendicularity (although it is also called vertical nature) by which the inspection cylinder 4 was stabilized while making adhesion with the vacancy plinth 6 good, preventing the breakage on a crack etc. and being able to bear sudden heavy vehicle load this -- installations, such as a slope land, and the back filling fastened and hardened -- carrying out -- the construction site of a layer 69 -- some allowance -- having -- it is obtained.

[0033] This drop Invar Urabe 2 and the inspection cylinder 4 are explained in full detail. In drawing 1, and 2 and 3, although the inspection cylinder 4 is an injection-molded product as mentioned above, the dimension is about 800mm in aperture about 200mmphi and height, and the thickness has the usual straight pipe made from vinyl chloride and this usual dimension by extrusion molding.

[0034] Although the soffit of this inspection cylinder 4 really injection molds drop Invar Urabe 2 as mentioned above The flange 5 which this drop Invar Urabe 2 installed in the method of outside from the soffit (good a little also in the upper part) of the inspection cylinder 4, the pars infundibularis lobi anterioris hypophyseos 7 which installed in the method of inside from the soffit of the inspection cylinder 4, and inclined downward, and the spigot part 8 as the underflow section (downdraft outlet) installed downward in the center of this pars infundibularis lobi anterioris hypophyseos 7, and the adhesive joint section -- since -- it constitutes.

[0035] Although this flange (it is also called the plinth contact section and the part which tells vehicle load to up to a plinth 6 is said) 5 can be formed also in the extension dimension of arbitration since it injection molds it and it is constituted, it has outer-diameter about 300mmphi and thickness of about 7mm in the thing of a graphic display.

[0036] Moreover, the triangle-like rib 9 of six 6mm thickness and 9 -- were set up on that top face, it united with the lower part outside surface of the inspection cylinder 4, and these ribs 9 are connected with this flange 5.

[0037] Therefore, without [as a result] distorting this, even if the component of a force of sudden horizontal vehicle load acts on the flange 5 which gave this rigidity, the distributed load of a plinth 6 was equated as much as possible, the bias depression of a plinth 6 was prevented, and the adverse effect to the mounting tubing 59 is prevented.

[0038] Moreover, said spigot part 8 is formed in long ** from the usual spigot insertion die length. In the case of about 110mm aperture phi, in the case of die length of about 87mm, and about 140mmphi In die length of about 97mm, and about 150mmphi, it forms in die length of about 110mm. An insertion stopper thru/or the push-in marked line 10 were formed, the insertion die length to the free bend (straight pipe) 60 and TS junction bend (straight pipe) by the side of the mounting tubing 59, a rubber ring junction bend (straight pipe), etc. was regulated, and dependability is given to the junction activity.

[0039] moreover, the plinth 6 -- the conventional thing -- heavy-gage and the shape of a doughnut of an abbreviation same configuration -- at least -- a hole, although constituted in the vacancy Especially, there is also insertion die-length regulation of a spigot part 8, that bore could be made into the minor diameter a little, and moreover inner sense inclined plane Tori 11 was formed in the bore side top face, among these the outside surface of the pars infundibularis lobi anterioris hypophyseos 7 was stuck by sense inclined plane Tori 11, and the reaction force active area which supports heavy vehicle load is expanded.

[0040] By this inner sense inclined plane Tori 11 and the flange installation crevice 12 of the top face of a plinth 6, to a plinth 6, drop Invar Urabe 2 does a back filling, in the time etc., cannot shift horizontally and can equate distribution of load as much as possible.

[0041] And this plinth 6 has a tilt angle of about 65 degrees of about 55mm in outer-diameter about 360mmphi and thickness, bore about 180mmphi, and inner sense

inclined plane Tori 11, and a depth of about 10mm of the flange installation crevice 12, and it forms meat NUSUMI 13 in the bore underside side of this plinth 6, and he is trying to be [in the case of the example of drawing 1] especially convenient also in connection with the free bend 60 grade by the side of the mounting tubing 59.

[0042]In addition, although the flange 5 of the example of a gestalt of this operation is installed in the method of outside in the soffit of the inspection cylinder 4 and forms the maximum reaction force active area, it may install this invention in the upper part a little from the soffit of not only this but the inspection cylinder 4. In this case, sense inclined plane Tori's 11 reaction force active area is reducible among plinths 6.

[0043]

[Effect of the Invention]As well as productivity and handling nature improving specially from the conventional thing, since a joint-less inspection cylinder and drop Invar Urabe were really injection molded according to claims 1 and 4 of this invention, since the plinth contact section was prepared under the inspection cylinder, if vehicle load does not get across to mounting tubing etc. but even about [not damaging mounting tubing etc.] and a plinth checks levelness, the perpendicularity of an inspection cylinder will be stabilized and will be obtained.

[0044]Even if a direction does not become settled but it becomes instability especially by the case where the free bend (bend with a rubber ring socket) is formed in the mounting tubeside, the perpendicularity of an inspection cylinder can be stabilized easily.

[0045]According to claim 2, since it is a flange outside the above, adhesion with a plinth can be secured and there is nothing with backlash also by the sudden heavy vehicle load which acts intermittently.

[0046]outside the above, among the pars infundibularis lobi anterioris hypophyseos and a plinth, while expanding reaction force active area and preventing the depression of measure further by sense inclined plane Tori, even if a load horizontal to an inspection cylinder acts, according to claim 3, it does not separate from a plinth

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]It is the important section side elevation of the example of a gestalt of operation of this invention.

[Drawing 2]It is the top view of drawing 1.

[Drawing 3]It is the whole example drawing of longitudinal section of a gestalt of operation of drawing 1.

[Drawing 4]It is important section drawing of the example of drawing 1.

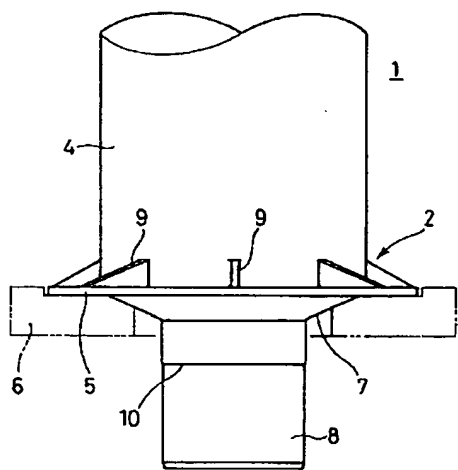
[Drawing 5]It is the conventional example.

[Description of Notations]

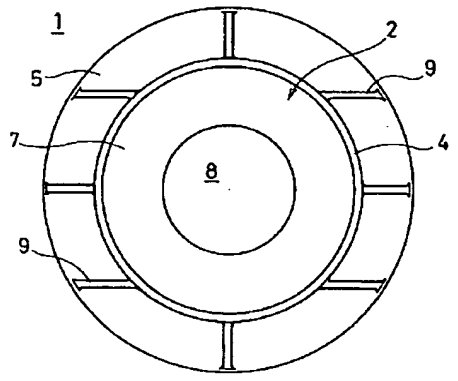
the diameter measure of the header made from 1 -- public common vinyl chloride, and 2 -- drop Invar Urabe, 4 -- inspection cylinders, 5 -- flange, and 6 -- a plinth, 7 -- pars infundibularis lobi anterioris hypophyseos, and sense inclined plane Tori in 11 --

DRAWINGS

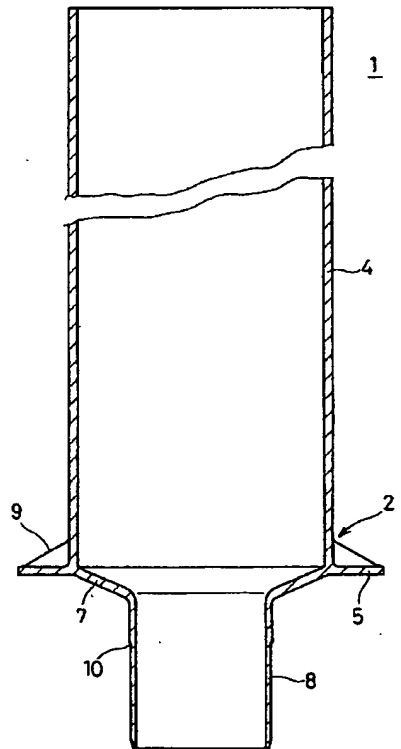
[Drawing 1]



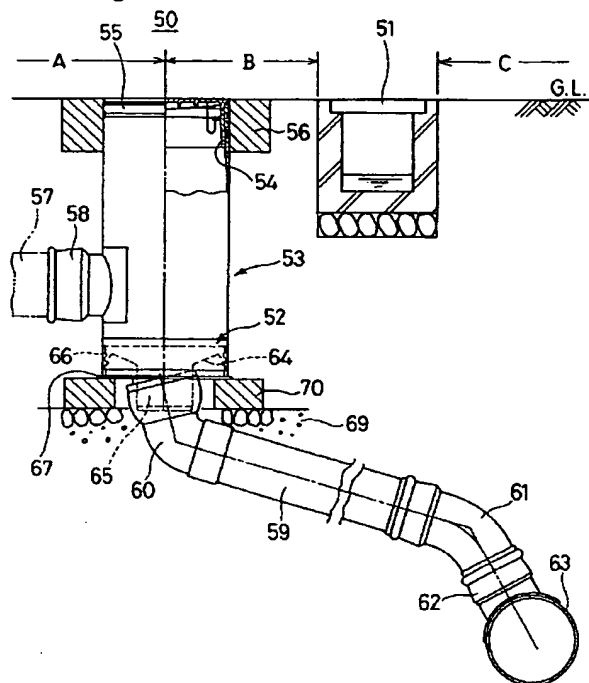
[Drawing 2]



[Drawing 3]



[Drawing 5]



[Drawing 4]

